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EXAMINER	
SHANG, ANNAN Q	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/679,210	GORDON ET AL.	
	Examiner	Art Unit	
	ANNAN Q. SHANG	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/19/10 has been entered.

Response to Arguments

2. Applicant's arguments/amendments with respect to claims 1-18 and 20-23 have been considered but are moot in view of the new ground(s) of rejection discussed below.

With respect to the rejection of the last office action, Applicant amends claims and further argues that the prior arts of record do not teach the amended claims limitations. i.e., “Eyer does not disclose that each generated guide stream, video stream, audio stream and data stream is assigned a respective packet identifier (PID)...that; "...fails to discloses receiving receive a plurality of video inputs, where each video input is associated with corresponding IPG page..." that "...fails to disclose generating a guide stream..., etc., (see page 11+ of Applicant's Remarks).

In response, Examiner disagrees. Examiner notes Applicant’s amendments/arguments, however, Eyer clearly discloses that the IPG data receive at

Satellite Uplink 100 (figs.1 and 2) includes global data is global services and local services or programming broadcast by satellite and national CATV networks and channel map and other configuration data (see inputs (3) of fig.1 to Uplink 100, col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+ and line 44-col.6, line 1+). Eyer further discloses that "**The satellite MUX, modulator and encoder 100 also receives all or, typically, portion of the global programming services themselves (e.g., digital audio and video, note also the plurality of A/V sources) as well as channel map data for both global and local programming services and other configuration data, discussed in greater detail in connection with FIG. 2." (col.6, lines 1-12). Eyer further meets other amended claims limitations, i.e., "...a session manager..." and "...a bandwidth manager..."** (col.1, lines 42-45, col.7, line 66-col.8, line 1+ and col.21, line 66-col.22, line 16) as discussed clearly below. Hence the amended claims do not overcome the prior arts of record. The amendment to the claims necessitated the new ground(s) of rejection discussed below. **This office action is non-final.**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

. 4. Claims 1-15 and 18-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Eyer et al (6,401,242)** in view of **Robinett et al (6831892)** and further in view of **Hendricks et al (6,463,585).**

As to claim 1, note the **Eyer et al** reference figure 2, disclose method and apparatus for delivering an Interactive Program Guide (IPG) data, to Integrated Receiver Decoders (IRDs) in a decoder population and further disclose a system for providing IPG, comprising:

A plurality of encoding units (Encoders 1-N or 220-230) each operative to receive a plurality of video inputs (See figs.1 and 2) each video input associated with a corresponding IPG page, encode a plurality of IPG pages **(Global + Local)**, an audio input and at least one data input, where each of the plurality of video inputs associated with IPG include guide portion and video portion, to encode the guide portion and the video portion of each video input associated with the IPG pages, the audio input and at least one data input and generate a guide stream for each of the video inputs and a video stream, au audio stream and at least one data stream, where each generated guide stream, video stream, audio stream and data stream is assigned a respective PID (figs.1 and 2, col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 1+ and col. 8, lines 16-32), which are operative to encode **National or Global-IPG data and Regional or Local-IPG data "a plurality of IPG pages" and generate bundles of IPG data and Audio/Video (A/V) data "a plurality of streams," where bundles of IPG data and A/V data is assigned a respective packet identifier (PID)** (col. 10, lines 55-65 and col. 15, lines 54-63); **note also col. 5,**

line 62-col. 6, line 12 and col. 7, lines 9-26 of Eyer et al (5,801,753) which is incorporate by reference);

At least one transport stream generator (MUX/MOD 250 of Uplink 100 or MUX/MOD of CATV 140 for each Region) operatively coupled to the plurality of encoding units and assigned to a distribution node, each transport generator operative to receive the generated streams (guide, video, audio and data) from one or more of the plurality of encoding units and to multiplex packets from the received streams into one or more transport streams where the at least one transport stream generator provides packets conveying a program mapping table (PMT) for each transport stream (figs.1 and 2, col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 1+, col. 8, lines 16-32 and col. 8, lines 29-32), note that **Eyer clearly shows Uplink 100 and a plurality of CATV 140 each with network ID (col.9, lines 1-23) within CATV networks 150 for each neighbor or region, each with MUX, MODULATOR and ENCONDER and receiving global and local programming services from satellite and other networks (telephone, computer, etc.) and MUX/MOD the streams accordingly**. The MPEG-2 Encoders 1-N, the MUX/MOD operative to receive the multiplex selected ones of the bundles of IPG data and A/V data from one or more MPEG-2 Encoders 1-N into one or more transport streams; and

A session manager (IPG Translator 220/Subscriber Authorization Center (SAC) 240) coupled to the at least one transport stream generator and the plurality of encoding units, the session manager being operator to manage the operation of the plurality of encoding units and the at least one transport stream generator and to service

demands of the distribution nodes (col.1, line 64-col.2, line 48, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 52, col. 8, lines 16-32 and col. 8, lines 29-32, col. 6, lines 13-19 and col. 8, lines 6-28), note that each MUX/MOD generate bundles of IPG data and A/V data "one or more transport streams" based on interest, regional area or geographical area and furthermore according to a tiered marketing scheme;

A bandwidth manager (IPG Translator 220/Subscriber Authorization Center (SAC) 240), coupled to the at least one transport stream generator for monitoring resources and bandwidth availability for encoding units, the bandwidth manager, in response to a demand from the distribution node, obtains information regarding available bandwidth and the various data bundles and associated IDs (PIDs, etc.) and **modifies these parameters for** transporting in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand (line 20 and col.10, line 38-col.11, col.col.21, line 66-col.22, line 16), note that IPG Translator 220 receives configuration data, parameters such as time slot size, output bit rate, etc. and bundles and schedules data based on bandwidth availability and rate control.

Eyer does not clearly teach obtaining information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand

However, in the same field of endeavor, **Robinett** discloses bandwidth optimization of video program bearing transport streams and further discloses obtains

information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node/user(s) to service the demand(s) to nodes/user(s) (figs.1-2, col.6, lines 8-27, col.12, line 21-col.13, line 17, col.31, lines 5-26 and col.32, line 4-col.33, line 67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Robinett into the system of Eyer to efficiently modify data and multiplexed data accordingly over the available communication bandwidth or network.

Eyer as modified by Robinett do not clearly teach, monitoring resources usage and availability for encoding by the encoders

However, note the **Hendricks et al** reference figures 1, 19-22, disclose targeting advertisement using television delivery system, where an Operation Center (OC) 202 and a Headend 208 and its Network Controller 214 (col. 13, lines 8-27 and col. 14, lines 12-26), generates group assignment plan and assigns television terminals to group, monitoring resources usage and availability and dynamically generating customizes menus on the fly based on these parameters (fig. 17, col. 16, lines 55-67, col. 19, lines 49-62, col. 20, lines 10-18, lines 36-40 and col. 55, line 64-col. 56, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hendricks into the system of Eyer as modified by Robinett to efficiently generate menus based on available resources to meet desired requested data.

As to claim 2, the claimed "a bandwidth manager…" is met by IPG Translator 220 and SAC 240 (col. 6, lines 13-19 and col. 8, lines 6-28), which is coupled to MUX/MOD 250 and operative to direct each MUX/MOD 250 to generate bundles of IPG data and A/V data "one or more transport streams" based on interest, regional area or geographical area, assigning IDs and different rates (col. 17, line 49-col. 18, line 7) for the bundles and using various parameters for delivering of bundles to meet the available bandwidth, for transmission via Transmitter 110 (col. 21, line 66-col. 22, line 7), but fails to explicitly teach monitoring usage of IPG data and reporting to the Headend.

However, **Hendricks,** teaches Headend Controller 214, which monitors usage of IPG menus, reports to OC 202 or HE 208, and generates menus on the fly based on usage to the user(s) (fig. 17, col. 16, lines 55-67, col. 19, lines 49-62 and col. 55, line 64-col. 56, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hendricks into the system of Eyer to monitor the IPG menu usage at the terminals and dynamic modify the IPG menus based on the usage and on-demand interactive program guide to meet the users' request, and further provide user-friendly menus, which enables the user to navigate through as desired, to retrieve programs.

As to claim 3, Eyer further discloses where the plurality of MPEG-2 Encoders 220-230 are operative to encode only once each IPG page to be transmitted from the least MUX/MOD 250 (col. 6, lines 13-19 and col. 8, lines 6-32).

As to claims 4 and 5, Eyer fails to explicitly teach dynamically adjusting based on demands from a neighborhood being served by the transport stream generator.

However, **Hendricks** further teaches dynamically adjusting Headend Modulators based on demands from a geographical region being served by the transport stream generator or Modulator (col. 19, lines 49-62 and col. 55, line 64-col. 56, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hendricks into the system of Eyer to dynamically adjust based on demands to better provide the needed services to the users.

As to claims 5-8, Eyer fails to explicitly teach where the IPG Translator 220 and SAC 240 "session manager" in response to the information communicated by the bandwidth manager, directs a particular transport stream generator to generate an additional transport stream when the information indicates a required number of PIDs exceeds the capacity of currently transmitted transport stream(s), if the number of streams to transmitted by the particular transport stream generator exceeds the capacity of currently transmitted stream(s), if a required number of PIDs exceeds a maximum number of PIDs supported by the current transmitted transport stream(s) and tear down a transport stream if usage falls below the capacity of remaining transport streams.

However, **Hendricks** further teaches an operation center (OC) 202, in communication with a plurality of Headend Controllers (HC) 214 of Headend 208, and Headend(s) 208 monitors the interactivities "usage" of various Set-top Terminals 220 located in different geographical areas or regions, and dynamically instructs the

appropriate modulators or transport streams generators and allocates bandwidth as demand increases, decreases, etc., (col. 19, lines 49-62 and col. 55, line 64-col. 56, line 14), which meets the claimed "directs a particular transport stream generator to generate an additional transport stream as usage increases and exceeds the capacity of currently transmitted transport stream(s), if the number of streams to transmitted by the particular transport stream generator exceeds the capacity of currently transmitted stream(s), if a required number of PIDs exceeds a maximum number of PIDs supported by the current transmitted transport stream(s) and tear down a transport stream if usage falls below the capacity of remaining transport streams."

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hendricks into the system of Eyer to dynamically adjust bandwidth based on demands to better provide the needed services to the users.

As to claim 9, Eyer further discloses each MUX/MOD 250 "TS generator" is operative to serve a respective group of terminals within a particular neighborhood (col. 3, lines 18-35, col. 7, lines 7-15 and col. 22, lines 17-29).

As to claim 10, Eyer further discloses where MUX/MOD 250 is operable to provide differentiated IPG for different regions or geographical areas via the one or more TS generated by the MUX/MOD 250 (col. 10, lines 10-48).

As to claim 11, Eyer further discloses where a plurality of transport streams are generated by a particular MUX/MOD 250, and where each of the plurality of TSs

includes a respective set of IPG pages for different regions or geographical areas (col. 10, lines 10-48).

As to claim 12, Eyer further discloses where the plurality of transport streams from the particular transport stream generator, include overlapping sets of IPG pages (col. 7, lines 16-45).

As to claim 13, Eyer further discloses where each the plurality of transport streams from a particular transport stream generator includes one or more common IPG pages (col. 6, lines 1-12 and col. 10, lines 10-38).

As to claim 14, Eyer further disclose where the bundles of Global-IPG and Local-IPG "sets of IPG pages" for the plurality of transport streams from the transport stream generator are organized to reduce likelihood of switching between transport streams at IRDs 130 or 300 (col. 6, lines 1-12 and col. 10, lines 10-38).

As to claim 15, Eyer further discloses where the Global-IPG and Local-IPG pages for the plurality of transport streams from the particular transport stream generator are organized to increase likelihood of PID transitions within the same transport stream (col. 10, lines 10-38).

As to claim 18, the claimed "A system for providing interactive program guide (IPG)…" is composed of the same structural elements that were discussed with respect to the rejection of claim 1.

As to claim 20, note the **Eyer et al** reference figure 2, disclose method and apparatus for delivering an Interactive Program Guide (IPG) data, to Integrated Receiver Decoders (IRDs) in a decoder population and further disclose a method for

providing IPG from a transmission source to a plurality of terminals, the method comprising:

Receiving a plurality of video inputs (see audio/video inputs in figs.1 and 2), each video input associated with a corresponding IPG page (Uplink 100 or CATV 140), an audio input and at least one data input, where each of the plurality of video inputs associated with IPG page include a guide portion and a video portion, encoding the guide portion and the video portion of each video input associated with the IPG pages, the audio input and at least one data input (figs.1 and 2, col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 1+, col. 8, lines 16-32 and col. 8, lines 29-32);

Generating a guide stream for each of the video inputs and a video stream, audio stream and at least one data stream, where each generated guide stream, video stream and data stream is assigned a respective packet identifier (PID); receiving the generated guide stream, video stream, audio stream and data stream from one or more of the plurality of encoding units (col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 1+, col. 8, lines 16-32 and col. 8, lines 29-32)

Multiplexing packets from the received streams into one or more transport streams; where the at least one transport stream generator provides packets conveying a program mapping table (PMT) for each transport stream; monitoring the operation of the plurality of encoding units encoding the plurality of IPG pages, audio input and data input (figs.1 and 2, col.1, lines 10-20, line 64-col.2, line 37, col.3, lines 9-17, line 62-col.5, line 1+, line 44-col.6, line 1+, col. 8, lines 16-32 and col. 8, lines 29-32), note that

Eyer clearly shows Uplink 100 and a plurality of CATV 140 each with network ID (col.9, lines 1-23) within CATV networks 150 for each neighbor or region, each with MUX, MODULATOR and ENCONDER and receiving global and local programming services from satellite and other networks (telephone, computer, etc.) and MUX/MOD the streams accordingly. The MPEG-2 Encoders 1-N, the MUX/MOD operative to receive the multiplex selected ones of the bundles of IPG data and A/V data from one or more MPEG-2 Encoders 1-N into one or more transport streams;

Monitoring demands (IPG Translator 220/Subscriber Authorization Center (SAC) 240) from the plurality of terminals; determining a current capacity of one or more transport streams an to determine whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the plurality of terminals to service the demands; the bandwidth manager, in response to a demand from the distribution node, obtains information regarding available bandwidth and the various data bundles and associated IDs (PIDs, etc.) and **modifies these parameters for** transporting in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand (line 20 and col.10, line 38-col.11, col.col.21, line 66-col.22, line 16), note that IPG Translator 220 receives configuration data, parameters such as time slot size, output bit rate, etc. and bundles and schedules data based on bandwidth availability and rate control.

Eyer does not clearly teach obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node to service the demand and communicates the obtained information to the session manager for servicing the demand

However, in the same field of endeavor, **Robinett** discloses bandwidth optimization of video program bearing transport streams and further discloses obtains information regarding whether sufficient bandwidth and PIDs are available in the one or more transport streams being transmitted to the distribution node/user(s) to service the demand(s) to nodes/user(s) (figs.1-2, col.6, lines 8-27, col.12, line 21-col.13, line 17, col.31, lines 5-26 and col.32, line 4-col.33, line 67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Robinett into the system of Eyer to efficiently modify data and multiplexed data accordingly over the available communication bandwidth or network.

Eyer as modified by Robinett do not clearly teach, monitoring demands from a plurality of terminals, determining current capacity of one or more transport streams and comparing the demands from the plurality terminals and dynamically adjusting the number of transport streams to be transmitted to the plurality of terminals based on a result of the comparing.

However, note the **Hendricks et al** reference figures 1 and 19-22, disclose a viewer interface for a television program delivery system and menu generation and menu selection of television programs, where Headend Controller 214, monitors

demands from a plurality of terminals and compares the demands from the plurality terminals and based on the result, dynamically generates on the fly menus and adjusts the number of transport streams to be transmitted to the plurality of terminals to meet the demands of the IPG menus based on the interaction to the IPG (fig. 17, col. 16, lines 55-67, col. 19, lines 49-62, col. 20, lines 10-18, lines 36-40 and col. 55, line 64-col. 56, line 14).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hendricks into the system Eyer as modified by Robinett to monitor the users demands or interaction to provide user-friendly or on-demand interactive program guide to the user, to enable the user to navigate through as desired to retrieve programs.

Claims 21-23, are met as previously discussed with respect to claims 5-8.

5. Claims 16 and 17, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Eyer et al (6,401,242)** in view of **Robinett et al (6831892)** and further in view of **Hendricks et al (6,463,585)** as applied to claims 1 above, and further in view of **McLaren (5,867,208)**.

As to claims 16 and 17, Eyer as modified by Robinett and Hendricks, fail to explicitly teach where the encoding unit, implements slice-based encoding scheme, and picture-based encoding scheme.

However, note the **McLaren** reference figures 1 and 2, discloses an interactive television system, where a Broadcaster Center, includes an Encoder 106, which

implements slice encoding and picture encoding scheme to provide video content to subscriber (col. 4, lines 47-67 and col. 11, line 59-col. 12, line 28).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of McLaren into the system of Eyer as modified by Robinett and Hendricks to include slice encoding and picture encoding to allow for scrolling in the picture such that all portions of the picture or IPG can be viewed on the subscriber television.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on 700am-500pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelly** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free).**

/Annan Q Shang/
Primary Examiner, Art Unit 2424

Annan Q. Shang